

18/06/2026

# Scheduling and Dispatch Programme SDP\_06

## Mod\_02\_26

Modifications Meeting 135 - 18<sup>th</sup> June 2026

This presentation provides the background, content and explanation for the proposed changes to the Trading & Settlement Code in relation to the Scheduling and Dispatch Programme Initiative 06 (SDP\_06)



# Contents

**01** Scheduling and Dispatch Programme Initiative 6

---

**02** Mod\_01\_25 Overview

---

**03** Mod\_02\_26 Proposal



# Scheduling and Dispatch Programme - Initiative 6 (SDP\_06)

The integration of Synchronous Condensers is vital for achieving Ireland's goal of **80% renewable electricity** and **95% SNSP** by 2030.

Synchronous Condensers provide the same benefits to the grid as conventional generators, without providing electricity.

Synchronous Condensers provide **inertia, reactive power control**, as well as addressing **short circuit** issues.

The current market framework does not accommodate the unique characteristics of synchronous condensers.

**SDP\_06** aims to:

- Realise the value of the services provided by synchronous condensers
- Enhance scheduling and dispatch mechanisms for synchronous condensers.



# Mod\_01\_25

Mod\_01\_25 established the main T&SC framework for Synchronous Condenser Units (SCUs) where no explicit framework previously existed.

Introduced definitions for Synchronous Condenser Units (SCUs), updated related definitions such as Generator Type and Fuel Type, and set out SCU specific registration criteria.

Mod\_01\_25 ensured SCUs are **appropriately reflected** across **registration, data submissions, QBOA / instruction profiling and imbalance pricing**, reflecting that these units do not produce energy, but instead consume it to provide vital system services.

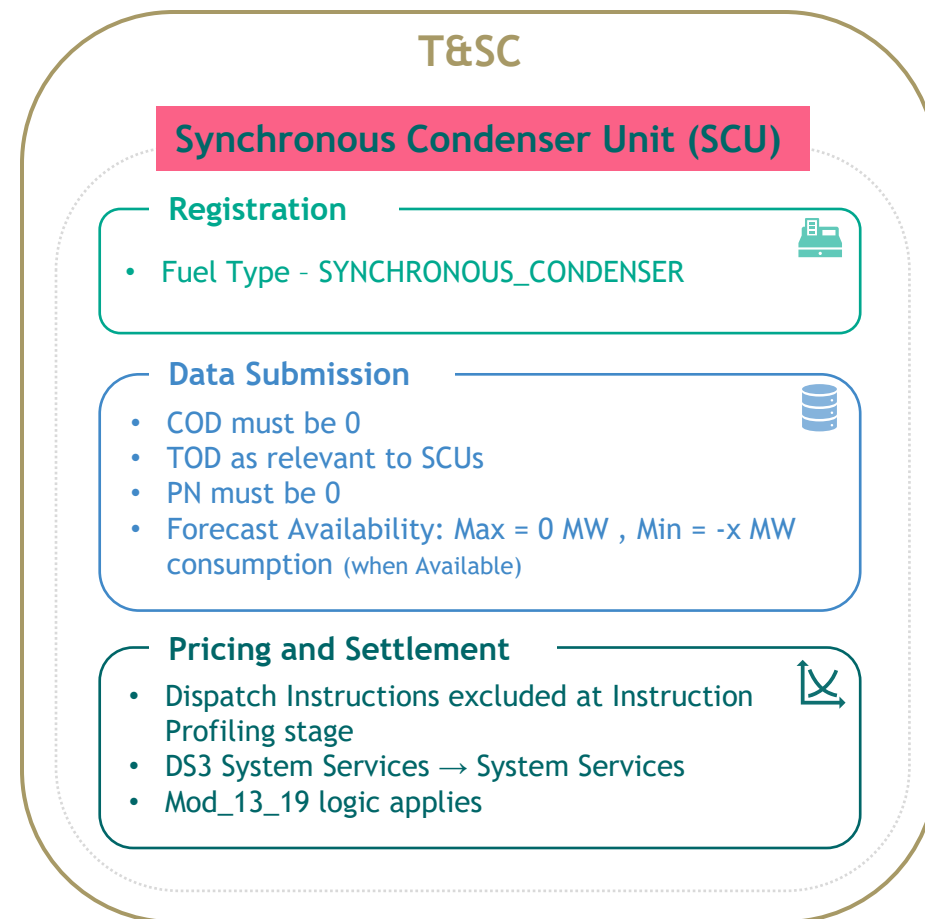


Figure 1. Mod\_01\_25 to T&SC

*Mod\_01\_25 established the primary T&SC framework for SCUs; Mod\_02\_26 is intended to build on that foundation through follow-on clarification / refinement.*

# Modification Proposal



# Mod\_02\_26 Proposal

## Issue and Purpose

While Mod\_01\_25 established the framework for Synchronous Condenser Units (SCUs), certain Technical Offer Data definitions were not fully adapted to reflect SCU characteristics.

Mod\_02\_26 seeks to clarify and refine specific T&SC definitions and provisions for SCUs, ensuring alignment with the design and implementation of SDP 06.

## Proposed Changes

- Clarify Glossary definitions - **Minimum Off Time, Ramp Rate, Registered Minimum Output** - to reflect SCU specific behaviour.
- Update **Appendix O: Instruction Profiling**, to reflect appropriate ramping trajectories for SCUs.
- Introduce minor updates to **Agreed Procedures (AP1 & AP4)** to ensure consistency in registration and data submission.

## Outcome

Ensures consistency between Code, system implementation, operational treatment of SCUs, and removes ambiguity in the application of these provisions.

# T&SC Modification Areas

- 1 Glossary
- 2 Appendices
- 3 Agreed Procedure



# T&SC Modification - Glossary (1/3)

## TSC Appendix I - Offer Data

(Table 2 - Technical Offer Data Elements)

	Validation Technical Offer Data	Validation Registration Data	<u>Synchronous Condenser Unit</u>
Minimum On Time (hours)	Yes		<u>Yes</u>
Minimum Off Time (hours)	Yes		<u>Yes</u>
Maximum On Time (hours)	Yes		<u>Yes</u>
Synchronous Start Up Time Hot (hours)	Yes		<u>Yes</u>
Synchronous Start Up Time Warm (hours)	Yes		<u>Yes</u>
Synchronous Start Up Time Cold (hours)	Yes		<u>Yes</u>
Ramp Down Rate 1 (MW / minute)	Yes		<u>Yes</u>
Ramp Up Rate 1 (MW / minute)	Yes		<u>Yes</u>
Start of Restricted Range 1 (MW)	Yes		<u>Yes</u>
End of Restricted Range 1 (MW)	Yes		<u>Yes</u>
Block Load Flag (True or False)	Yes		<u>Yes</u>
Registered Minimum Stable Generation (MW)	Yes		<u>Yes</u>
Registered Minimum Output (MW)		Yes	<u>Yes</u>

## TSC Glossary

<b>Minimum Off Time</b>	<p>means the minimum time that a Generator Unit must remain producing no Active Power commencing at the time when it first stops producing Active Power.</p> <p><u>For Synchronous Condenser Units, means the minimum time that must elapse from the time the unit is Desynchronised before it can be instructed to Start Up</u></p>
-------------------------	--

Proposed additional text to clarify how this definition applies to Synchronous Condenser Units.

# T&SC Modification - Glossary (2/3)

## TSC Appendix I - Offer Data

(Table 2 - Technical Offer Data Elements)

	Validation Technical Offer Data	Validation Registration Data	<u>Synchronous Condenser Unit</u>
Minimum On Time (hours)	Yes		<u>Yes</u>
Minimum Off Time (hours)	Yes		<u>Yes</u>
Maximum On Time (hours)	Yes		<u>Yes</u>
Synchronous Start Up Time Hot (hours)	Yes		<u>Yes</u>
Synchronous Start Up Time Warm (hours)	Yes		<u>Yes</u>
Synchronous Start Up Time Cold (hours)	Yes		<u>Yes</u>
Ramp Down Rate 1 (MW / minute)	Yes		<u>Yes</u>
Ramp Up Rate 1 (MW / minute)	Yes		<u>Yes</u>
Start of Restricted Range 1 (MW)	Yes		<u>Yes</u>
End of Restricted Range 1 (MW)	Yes		<u>Yes</u>
Block Load Flag (True or False)	Yes		<u>Yes</u>
Registered Minimum Stable Generation (MW)	Yes		<u>Yes</u>
Registered Minimum Output (MW)		Yes	<u>Yes</u>

## TSC Glossary

<b>Ramp Down Rate</b>	means the Ramp Rate associated with a decrease in Active Power <del>production</del> by a Generator Unit.
<b>Ramp Rate</b>	means the rate of increase or the rate of decrease in Active Power <del>produced</del> by a Generator Unit (excluding Trading Units, Assetless Units, Interconnector Error Units and Interconnector Residual Capacity Units).
<b>Ramp Up Rate</b>	means the Ramp Rate associated with an increase in Active Power <del>production</del> by a Generator Unit.

Proposed removal of “produced/production” to make the definitions applicable to Synchronous Condenser Units, which do not produce Active Power.

# T&SC Modification - Glossary (3/3)

## TSC Appendix I - Offer Data

(Table 2 - Technical Offer Data Elements)

	Validation Technical Offer Data	Validation Registration Data	<u>Synchronous Condenser Unit</u>
Minimum On Time (hours)	Yes		<u>Yes</u>
Minimum Off Time (hours)	Yes		<u>Yes</u>
Maximum On Time (hours)	Yes		<u>Yes</u>
Synchronous Start Up Time Hot (hours)	Yes		<u>Yes</u>
Synchronous Start Up Time Warm (hours)	Yes		<u>Yes</u>
Synchronous Start Up Time Cold (hours)	Yes		<u>Yes</u>
Ramp Down Rate 1 (MW / minute)	Yes		<u>Yes</u>
Ramp Up Rate 1 (MW / minute)	Yes		<u>Yes</u>
Start of Restricted Range 1 (MW)	Yes		<u>Yes</u>
End of Restricted Range 1 (MW)	Yes		<u>Yes</u>
Block Load Flag (True or False)	Yes		<u>Yes</u>
Registered Minimum Stable Generation (MW)	Yes		<u>Yes</u>
Registered Minimum Output (MW)		Yes	<u>Yes</u>

## TSC Glossary

<b>Registered Minimum Output</b>	means the minimum level of Output at which a Generator Unit may operate submitted for the Generator Unit in accordance with Appendix H: "Data Requirements for Registration". Registered Minimum Output is zero except for Pumped Storage Units, <del>or</del> Battery Storage Units <u>and Synchronous Condenser Units</u> , for which the Registered Minimum Output shall be equal to the pumping capability, <del>or</del> charging capability, <u>or consumption level</u> respectively.
----------------------------------	--

Proposed additional text to clarify the definition for Synchronous Condenser Units, where the Registered Minimum Output represents the unit's consumption level.

# T&SC Modification - Appendices (1/2)

Proposed additional text to clarify the application of ramp up trajectory for Synchronous Condenser Units.

## APPENDIX O: INSTRUCTION PROFILING CALCULATIONS

28. The ramp up trajectory of a Generator Unit is a piecewise linear curve that describes the theoretical Output of a Generator Unit over time from Registered Minimum Stable Generation to the Maximum Generation; ~~or~~ in the case of a Battery Storage Unit ~~it is~~, from the Registered Minimum Output to zero and from Registered Minimum Stable Generation to the Maximum Generation, or in the case of a Synchronous Condenser Unit, from the Registered Minimum Output to Maximum Generation, determined, as applicable, by:

(a) The following Technical Offer Data:

- (i) Maximum Generation;
- (ii) Registered Minimum Stable Generation;
- (iii) Ramp Up Rates 1, 2, 3, 4 & 5;
- (iv) Ramp Up Break Point 1, 2, 3 & 4;
- (v) Dwell Time Up 1, 2 & 3;
- (vi) Dwell Time Up Trigger Point 1, 2 & 3; and
- (vii) Registered Minimum Output.

(b) Each segment of the piecewise linear ramp up trajectory for the Generator Unit which is identified by start MW, end MW, rate in MW/min and the time from start MW to end MW.

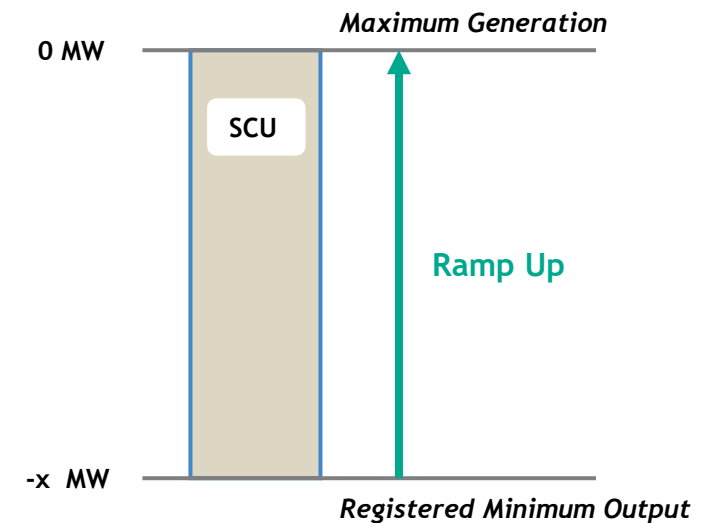


Figure 2. Application of Ramp Up for Synchronous Condenser Units (SCUs)

# T&SC Modification - Appendices (2/2)

Proposed additional text to clarify the application of ramp down trajectory for Synchronous Condenser Units.

## APPENDIX O: INSTRUCTION PROFILING CALCULATIONS

29. The ramp down trajectory of a Generator Unit is a piecewise linear curve that describes the theoretical Output of a Generator Unit over time from the Maximum Generation for the Generator Unit to Registered Minimum Stable Generation; ~~or~~ in the case of a Battery Storage Unit it is, from the Maximum Generation to Registered Minimum Stable Generation and from zero to the Registered Minimum Output, or in the case of a Synchronous Condenser Unit, from Maximum Generation to the Registered Minimum Output, determined, as applicable, by:

(a) The following Technical Offer Data:

- (i) Maximum Generation;
- (ii) Registered Minimum Stable Generation;
- (iii) Ramp Down Rate 1, 2, 3, 4 & 5;
- (iv) Ramp Down Break Point 1, 2, 3 & 4;
- (v) Dwell Time Down 1, 2 & 3;
- (vi) Dwell Time Down Trigger Point 1, 2 & 3; and
- (vii) Registered Minimum Output.

(b) Each segment of the piecewise linear ramp down trajectory for the Generator Unit which is identified by start MW, end MW, rate in MW/min and the time from start MW to end MW.

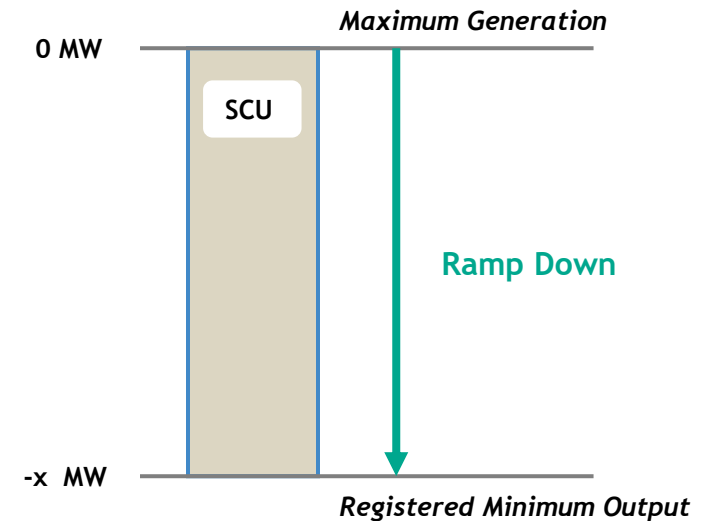


Figure 3. Application of Ramp Down for Synchronous Condenser Units

# T&SC Modification - Agreed Procedure 1: Registration

Proposed additional text to clarify that no other Generator Unit may be registered at a Trading Site containing a Synchronous Condenser Unit.

## 2.3 Units as Part of Trading Sites

Each Generator Unit (excluding Pumped Storage Units, Interconnector Residual Capacity Units, Interconnector Error Units, Assetless Units), including Trading Units and Demand Side Units shall be registered as part of a Trading Site. The following rules apply to registering Units as part of Trading Sites:

- (a) Each Trading Site shall contain at least one Generator Unit (except where the Generator Unit is registered as a Trading Unit).
- (b) Where the Generator Unit registered on a Trading Site is a Demand Side Unit or a Synchronous Condenser Unit, no other Generator Unit can be registered on that site.
- (c) All Trading Sites must record to it an Associated Supplier Unit or a Trading Site Supplier Unit.
- (d) Any Party registering an Autoproducer Site must register a Trading Site Supplier Unit as part of the relevant Trading Site.
- (e) A Trading Unit can only be registered on a Trading Site that is an Autoproducer Site. Each Unit registered as part of a Trading Site shall be registered to the same Participant except where the Party does not intend to register a Trading Site Supplier Unit.
- (f) A Trading Site containing an Aggregated Generator Unit must record to it an Associated Supplier Unit.
- (g) This Associated Supplier Unit may be registered by a different Participant to the Participant registering the Generator Unit.
- (h) A Supplier Unit can be registered as an Associated Supplier Unit for multiple Trading Sites.
- (i) A Trading Site Supplier Unit can only contain Demand related to the Trading Site to which it is registered.
- (j) The Firm Access Quantity of a Trading Site shall be recorded within the Participation Notice, where a Generator Unit operates under a Connection Agreement which provides for a Firm Access Quantity which is less than the Maximum Export Capacity of the relevant site.

# T&SC Modification - Agreed Procedure 4: Transaction Submission and Validation

Proposed additional text to include **SYNCHRONOUS\_CONDENSER** within the list of valid Fuel Type.

**Table 9: Business Data per Element**

Class / Element	Screen Name	Comment	Data Category
MPR / Resource Balancing	Participant Name	The name of the Market Participant whose resource is being modified.	RD
	Resource Name	Short name for the Resource that is being modified.	RD
	Resource Type	The type under which a specific resource is registered.  Valid values: Generator, Demand Side Unit, Assetless Trading Unit, Trading Unit, External Unit, Supplier Unit, Interconnector, Capacity Aggregation Unit, Interconnector Error Unit, Interconnector Residual Capacity Unit.	
	Start Date	Start Date from when the submitted data is to become effective.	RD
	End Date	End Date to when the submitted data is effective	RD
	Fuel Type	Valid values: BATTERY_STORAGE (BATTERY), BIOMASS, COAL, COMBINED_HEAT_AND_POWER (CHP), COMPRESSED_AIR_STORAGE (CAS), DISTILLATE, FLY_WHEEL, GAS, HYDRO, MULTI_FUEL, NUCLEAR, OIL, PEAT, PUMP_STORAGE (PUMP), Solar Power Units will be set equal to WIND, WIND, <b>SYNCHRONOUS_CONDENSER</b> , OTHER	RD
	Dispatchable	Indicate that the resource is dispatchable (True or False)	RD
	Priority Dispatch	Indicate that the resource is priority dispatch (True or False)	RD
	Energy Limited	Indicate that the resource is energy limited resource (True or False)	RD

Thanks !

Questions ?

